

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Peter CRIPPS, et al.  
Serial No.: 10/082,351  
Filing Date: February 26, 2002  
Confirmation No. 9717  
Group Art Unit: 2531  
Examiner: Freshteh N. Aghdam  
Title: **SMART ANTENNA BASED SPECTRUM  
MULTIPLEXING USING A PILOT SIGNAL**

**MAIL STOP AF**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**ELECTRONICALLY FILED WITH THE USPTO  
ON : June 22, 2006**

Dear Sir:

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

The following Pre-Appeal Brief Request for Review (“Request”) is being filed in accordance with the provisions set forth in the Official Gazette Notice of July 12, 2005 (“OG Notice”). Pursuant to the OG Notice, this Request is being filed concurrently with a Notice of Appeal. Applicants respectfully request reconsideration of the Application in light of the remarks set forth below.

**REMARKS**

Applicants contend that the rejections of Claims 1-22 on prior art grounds contain clear legal and factual deficiencies, as described below. In a Final Office Action mailed March 22, 2006 (the “Final Office Action”), Claims 1-2, 5-7 and 22 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,369,758 issued to Zhang (“*Zhang*”), while Claims 3-4, 8-11 and 12-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Zhang*.

With respect to Claim 1, the Final Office Action contends that *Zhang* teaches “receiving a plurality of data signals and a plurality of pilot signals on a plurality of antenna elements, each data signal from the plurality of data signals being uniquely associated with a pilot signal from the plurality of pilot signals, each pilot signal from the plurality of pilot signals having a first characteristic and a second characteristic.” However, as discussed in Applicant’s response dated April 17, 2006 at pages 11-12, *Zhang* contains no such teaching, suggestion, or disclosure. Instead, *Zhang* discloses that:

Transmissions in accordance with the present invention comprise successively transmitted frames. A preferred transmission frame format, indicated by numeral 38, is shown in FIG. 2. Each frame 38 includes a number of consecutively transmitted symbols, including a preamble that includes a null symbol 42 and one of two possible adaptive antenna array training symbols (TRS I or TRS II) 44. The preamble is followed by a predetermined number of OFDM symbols 40. Each OFDM symbol includes a plurality of modulated subcarriers. Preferably one of the OFDM subcarriers is a pilot carrier 46 modulated with constant modulus signals (such as QPSK) during the duration of the OFDM portion of frame 38.

Col. 4, ll. 29-41. The Examiner relies on *Zhang*’s disclosure of “power characteristics of the separated training signal information” (col. 3, ll. 1-18) and “power characteristics of the constant modulus pilot carrier” (col. 3, ll. 19-30) as the first and second characteristics of the pilot signal recited in Claim 1. *See* Final Office Action, p. 4. However, the power characteristics disclosed by *Zhang* are actually characteristics of two different signals (the training signal and the pilot carrier), not the same pilot signal. Moreover, the training signal cited by the Examiner is not a pilot signal as recited in Claim 1. In fact, *Zhang* clearly distinguishes between a training signal and a pilot signal. *See* col. 4, ll. 29-41. As such, the two cannot be equivalent. Examiner’s arguments to the contrary (Final Office Action, pp. 2-

3) are plainly incorrect. Therefore, as *Zhang* fails to teach, suggest, or disclose “receiving . . . a plurality of pilot signals . . . each pilot signal from the plurality of pilot signals having a first characteristic and a second characteristic,” Applicants submit that the rejection of Claim 1 is clearly improper and respectfully request that the rejection be withdrawn.

Applicants submit that Claims 2-22 contain limitations similar to those recited in Claim 1. Therefore, Applicants request that the rejections of Claims 2-22 be withdrawn as well.

**CONCLUSION**

As the rejections of Claims 1-22 contain clear deficiencies, Applicants respectfully request full allowance of Claims 1-22. To the extent necessary, the Commissioner is hereby authorized to charge any required fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,  
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